The Normandy Landing

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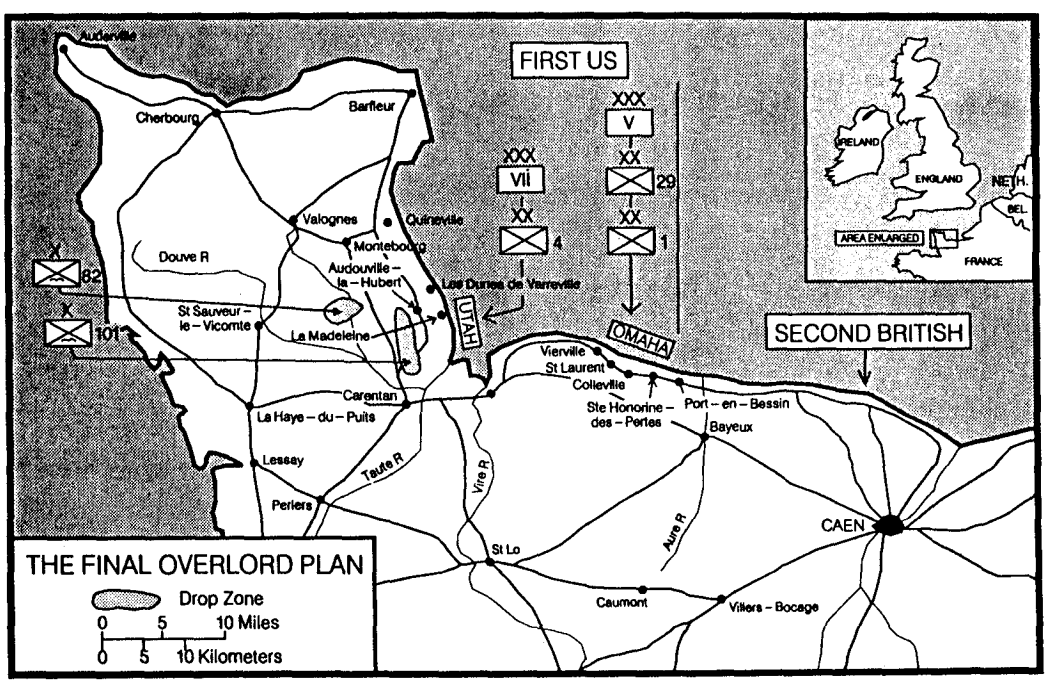
On 6 June 1944, the Allies began Operation OVERLORD, the invasion of the European continent that was designed to bring to a close a war that had lasted far too long. The amphibious assault on Normandy in World War II was the key to the continent. Two years of planning went into Operation NEPTUNE, as the landing on Normandy was known. The troops would assault in five beach areas with an initial strength of six reinforced infantry divisions landing from the sea and three airborne divisions dropping behind the lines by parachute and glider. The First United States Army would land on two beaches, and the Second British Army would land on three beaches.



Final Overlord Plan

The planners chose First Army to make the D-day assault for the Americans on two beaches, OMAHA and UTAH. They assigned OMAHA Beach to V Corps, with its 1st and 29th Infantry Divisions. VII Corps got UTAH Beach. Its 82d and

101st Airborne Divisions would drop inland and link up with the 4th Division landing on the beach several hours later.

The Engineer Special Brigade Group (Provisional), consisting of the 5th and 6th Engineer Special Brigades (ESBs), provided landing support for V Corps. On D-day it landed 34,250 men and 2,870 vehicles. Of these, 5,632 men and 315 vehicles belonged to the Engineer Special Brigade Group. Approximately 2,500 other engineers—members of corps and divisional units—also landed. Engineers made up approximately 25 percent of all the troops that landed on OMAHA.

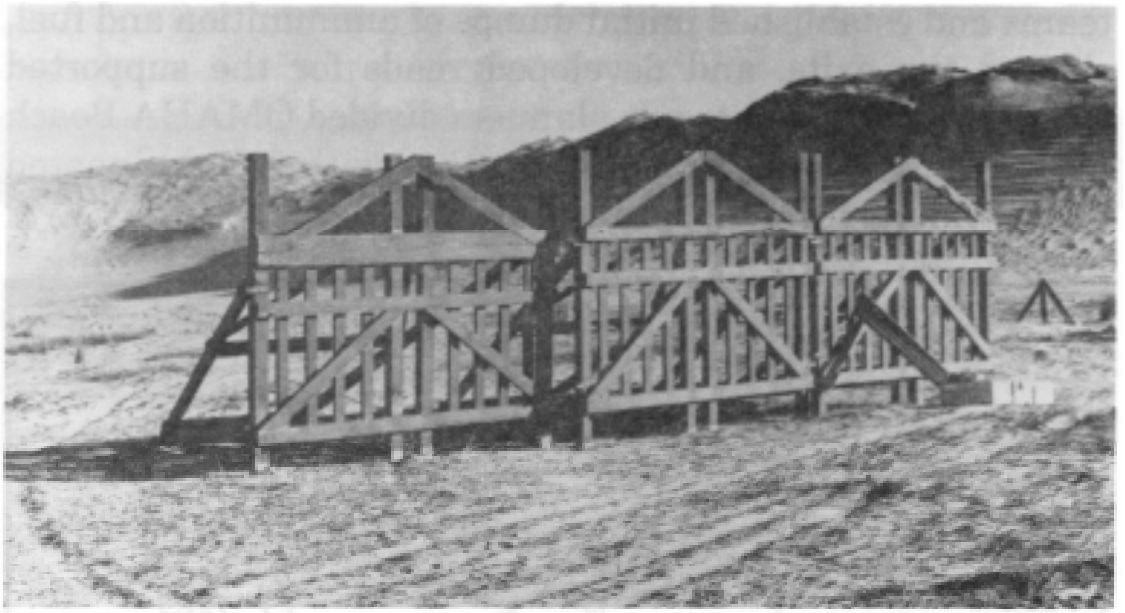
Thirty engineer officers and 516 engineer enlisted men, to include 11 officers and 115 enlisted men who were Navy demolitions personnel, landed with the 1,450 assault infantry during the first phase of the operation. Of the personnel that made the initial landings at 0630 hours on 6 June 1944, engineers represented over one-third.

The 1st Engineer Special Brigade (ESB) conducted similar operations on the American UTAH Beach where, on the first day of the invasion, it put ashore some 20,000 troops and 1,700 vehicles of VII Corps' 4th Infantry Division and supported units.

Assault gapping teams designed to blow holes in the obstacle lines on the beach, called Assault Force O (OMAHA) and Assault Force U (UTAH), trained at the British Assault Training Center, Woolacombe, England. Intelligence provided aerial photographs showing types of obstacles on OMAHA Beach, and mockups were made of these for training purposes. The men completed schooling in four weeks.

OMAHA Beach was a 7,000-yard slash of sand with up to 200 feet exposed at high tide and as much as 400 yards showing at low tide. An 8-foot bank of coarse shingle (gravel) marked the seaward edge of the western part of the beach. To the rear of the center of the beach, a line of grass-covered bluffs rose some 100 to 170 feet. They sloped downward at either end, merging with the rocky coast that enclosed OMAHA.

Generally, the obstacles on OMAHA consisted of two bands, 50 to 75 yards wide, with about the same distance separating them. The outer line of obstacles consisted of: element C (Belgian Gate) with a specially adapted waterproofed version of the German, powerfully lethal, antitank



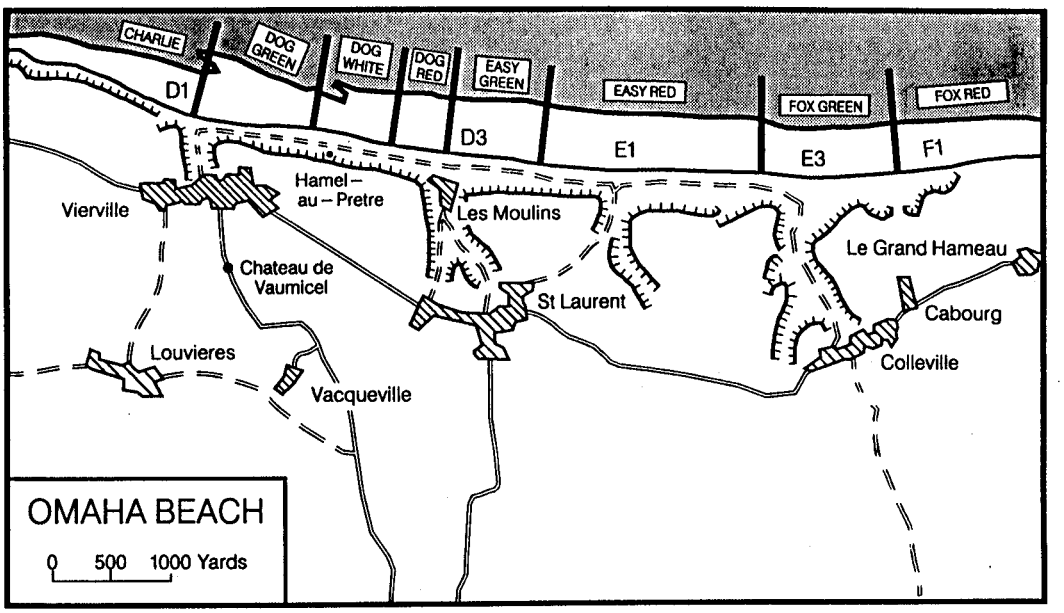
Model of a Belgian Gate, part of the engineer demolition range at the U.S. Assault Training Center, 11 February 1944.

Teller mine on a pole, UTAH Beach, France, 15 September 1944.

Teller mine on the forward face; wooden ramps; and posts topped with Teller mines. The inner band combined wooden posts and ramp-style obstacles backed by three staggered rows of steel hedgehogs. The Germans spaced the element C, ramp-type, and post-type obstacles 20 to 40 feet apart and scattered them in depth. They spaced the steel hedgehogs 10 to 15 feet apart.

The general plan for the engineers called for the progressive development of the OMAHA beachhead in three phases: the assault phase, the initial dump phase, and the beach maintenance dump phase. The first two phases took place on D-day. During the assault phase, engineer special assault gapping teams, support teams, and command teams came ashore and destroyed the obstacles lining the shore. Engineer battalion beach. groups followed these engineer

teams and established initial dumps of ammunition and fuel, cleared the exits, and developed roads for the supported infantry units. The assault planners divided OMAHA Beach into eight contiguous landing beaches with five designated exits leading through natural draws.



OMAHA Beach

Engineer assault, support, and command teams were alike in composition, but the assault teams carried fewer demolitions. Each team consisted of 28 Army engineers and a Naval Combat Demolition Unit (NCDU). The NCDU consisted of a naval officer and 12 enlisted men, 7 from the Navy and 5 (volunteers) from the Army. The teams carried 1,000 pounds of explosives, demolition accessories, mine detectors, mine gap markers, and other materials. Each member lugged 75 pounds of equipment, including 40 pounds of explosives. Sixteen assault teams went in with the infantry in the first wave to blow 50-yard gaps in the obstacles on the first tide, the Navy units working on the seaward band of obstacles and the Army units clearing the inshore obstacles. The support teams followed up within eight minutes, enlarging the gaps on the beach and destroying obstacles.

The 299th Engineer Combat Battalion (less one company at UTAH Beach) and ten NCDUs accompanied the 16th Infantry landing on the eastern sector of OMAHA. The 299th was the only American unit to land at both OMAHA and

UTAH beaches on 6 June 1944. The 146th Engineer Combat Battalion, with 11 NCDUs, supported the 116th Regimental Combat Team (RCT) in the western sector. Each of the engineer battalions consisted of eight assault demolition teams (each having one NCDU), four support demolition teams, and a command team. The support teams got the remaining five NCDUs.

American assault troops mass behind the protective front of a landing craft as it nears a beachhead on the northern coast of France, 6 June 1944.

For the first troops on OMAHA, the early hours bordered on disaster. Because of the haze and strong shore currents, all landed to the left of their assigned beaches by 700 to 2,000 yards. Devastating machine gun fire raked the beach. All told, the Germans damaged about 60 percent of the equipment and wounded about 34 percent of the attacking force.

On the left of Easy Red, the engineer assault team led by Second Lieutenant Phil1 C. Wood, Jr., Team 14, landed at least five minutes early. An artillery shell killed most of his Navy team. The survivors wired a line of obstacles but could not blow them because the infantry took cover behind

the obstacles and refused to move. Wood then moved his men forward to support the infantry.

Other engineer assault teams had little more success. Team 13 lost its naval detachment when an artillery shell hit its boatload of explosives at Easy Red. The rest of the team could not set off its charges on the obstacles because infantry landing parties used them for cover. Team 12 cleared a 30-yard gap on Easy Red, but lost 19 men when a German mortar shell struck a line of primacord, prematurely setting off the charges strung about one series of obstacles. Team 11 arrived on the far left bank of Easy Red ahead of the infantry and lost over half of its men to enemy fire. A faulty fuse prevented the remainder of the team from blowing a passage through the obstacles.

Only two teams, 9 and 10, accomplished their missions on the eastern sector of OMAHA. Team 9 landed in the middle of Easy Red well ahead of the infantry waves and opened a 50-yard path for the main assault. Despite heavy casualties, Team 10, within 20 minutes of landing, cleared the infantry from behind the obstacles and demolished enough barriers to create gaps 10 to 50 yards wide.

The rest of the teams in the area fared about as well as Lieutenant Wood's team. At Fox Green, Team 16 plunged off its landing craft, mechanized (LCM) at 0633. Here too the infantry refused to leave the protective cover of the obstacles.

Team 15 lost several men to machine gun fire before landing at 0640 hours. It took more casualties when a shell hit its explosive-laden rubber boat. The survivors attacked the Belgian Gates farthest from shore, but heavy enemy fire cut away fuses as rapidly as the engineers could rig them. One burst of fragments carried away a fuseman's mechanism, along with all of his fingers. The team had no choice but to run for the protective low shingle bank on shore. Only 4 of the original 40-man team remained uninjured.

Seven teams bound for the 116th Infantry's beaches on the western half of OMAHA—Dog Green, Dog White, Dog Red, and Easy Green—were on schedule, most coming in ahead of the infantry companies in the first waves. The eighth team landed more than an hour late, its landing craft, tank (LCT) having sunk shortly after leaving England. The duplex-drive tanks, used as artillery on the 116th Infantry's beaches, could not match the German guns.

Team 8 landed a little to the left of Dog Green and blew a 50-yard gap in the barrier line before the infantry landed. Teams 3 and 4 were badly shot up and accomplished little. Teams 5 and 7 could not do a thing because the infantry took cover among the beach obstacles. Teams 1 and 6 managed to open 50-yard gaps, one on Dog White and the other on Dog Green.

Eight support teams and two command teams, scheduled to arrive within eight minutes, arrived late, between 0640 and 0745, and off course near Fox Red. Command Boat 1 unloaded a crew on the beach flat of Easy Green at 0645 and opened a 50-yard gap in the obstacles. Team D opened a gap of 30 yards, but the rest of the teams accomplished little else. German artillery put two rounds into Team F's LCM, wounding and killing 15 men. Only 4 men of the original team got to shore.

Of the 16 M4 tank dozers scheduled to land with the assault gapping teams, only 6 got ashore. With the beach so crowded, the engineers defused the mines on obstacles instead of blowing them. They then used the tank dozers to shove the barriers aside. Eventually the Germans knocked out all but 1 of the dozers.

The second phase of engineer operations on OMAHA began with the arrival of the four beach groups charged with providing overall control to engineer operations on the beaches: the 37th Engineer Battalion Beach Group, the 149th Beach Group with the 112th and 147th Engineer Combat Battalions (ECB), and the 348th Beach Group. The 336th Engineer Combat Group was scheduled to arrive in the afternoon and organize Fox Red.

The first landings of the engineer groups began with Captain Louis J. Drnovich, commanding officer of Company A, 37th ECB, who arrived at 0700 hours on Fox Green opposite Exit 3, 10 minutes ahead of schedule. Within the next 20 minutes, three other detachments of the battalion came ashore. Enemy fire still swept the beach, so these men assisted in aiding the wounded and in building up the fire line from the protection of the shingle instead of performing their engineer mission. At Exit E-1, one of two landing craft, infantry (LCIs) carrying the battalion staff broached on a stake and had to drop the men off into neck-deep water. They

waded ashore under machine gun fire to a beach still crowded with the men of the first waves. A mortar round killed the commander of the 37th, Lieutenant Colonel Lionel F. Smith, and two members of his staff, Captains Paul F. Harkleroad and Allen H. Cox, Jr., as soon as they landed. An LCI put Company B, 37th ECB, ashore safely at 0730 hours at Exit E-l, but Company A, scheduled to open Exit E-3 for the 3d Battalion, did not arrive until 0930. It had landed near E-l and had to make its way east through the wreckage on the beach to E-3 where it ran into such heavy fire that it did little all day. Company C lost many men when it took a direct hit to its LCI on landing at Exit E-l.

Farther west, a 28-man reconnaissance and beach-marking team of Company C, 149th ECB, in support of the 116th Infantry, arrived at 0705 hours, five minutes early. It landed on Easy Green rather than the assigned Dog Red just to the west. The rest of the company arrived in LCTs at 0720 hours and moved forward to the shingle line while under fire from the hill behind the beach. Even though they were on the wrong beach, the men began cutting an access road through the dune line to the beach's lateral road. But heavy fire forced them back to the beach.

After landing on a beach in France, engineers lay out roads on the soft sands for the heavy vehicles and equipment yet to come ashore, 6 June 1944.

Still f&her west, the first wave of the 147th ECB, 90 men of Companies B and C, reached Dog White at 0710. Artillery set the 147th's landing vessel afire and caused 45 casualties. The engineers left the boat in neck-deep water, abandoning their carry-off equipment.

The confusion of the first hour of the invasion mounted during the next. Landings continued, but men and vehicles could not move off the beach. Divisional and group engineers

Carrying full equipment, American assault troops move onto OMAHA Beach on the northern coast of France, 6 June 1944.

blew gaps here and there in the barbed wire along the dunes, and a few small infantry detachments managed to work their way toward the base of the slopes, but most of the units piled up behind the shingle bank in rows three deep. In many cases, the officers of these units had been killed or wounded. The rest of the 37th ECB landed in several groups near Exit E-l. Artillery fire twice drove away from shore the craft carrying the mine removal platoon of Company B. It was finally hit and beached. An 88-mm. shell destroyed the steering gear of the LCT bearing the reconnaissance group of Company C, forcing it to make an emergency landing. Units of the 348th ECB landed near E-l instead of on Fox Beach as planned.

Obstacles on Easy Red forced LCI 92, with units of the 147th and 149th, to move to Dog White where it tried to force its way ashore. A mine set it afire causing heavy casualties. The survivors jumped into neck-deep water and made their way to shore. Many suffered from burns, shock, and exposure.

Slowly, against stiff German opposition, the Americans began opening the exits. At Exit E-1, where Lieutenant Colonel William B. Gara's 1st ECB and the attached 20th ECB worked on clearing a road off the beach, Sergeant Zolton Simon, Company C, 37th ECB, led his five-man squad in clearing and marking a narrow path through the mines. Wounded once while sweeping for mines, Simon got a second more serious wound after reaching the top of the bluff, but a path had been cleared. For his actions, he was awarded the Silver Star. Exposed to enemy fire, First Lieutenant Charles Peckham of Company B stood in the path and urged the infantrymen to follow Simon up the now mine-free trail. He received the Bronze Star.

To exploit the initial success at E-1, the engineers had to expand the exit lanes quickly. Mines, barbed wire, obstacles, antitank ditches, and impassable gravel and sand barred the tanks from moving until Private Vinton Dove, a bulldozer operator from Company C, assisted by his relief operator, Private William J. Shoemaker, took on these obstacles. Dove and Shoemaker cleared a road through the shingle, removed a roadblock at E-1, and filled the antitank ditch, opening a path for the Sherman tanks. For their actions, both men received the Distinguished Service Cross (DSC).

First Lieutenant Robert P. Ross, Company C, won the third of the three DSCs awarded to men of the 37th on D-day. Heavy fire from a hill overlooking Exit E-1 held up the advance so Lieutenant Ross added a leaderless company of infantry to his own engineer platoon and fought his way up the bluff. Ross's mixed command killed 40 Germans and captured two machine gun positions. Largely due to the efforts of men like Simon, Peckham, Dove, Shoemaker, and Ross, E-1 was cleared by noon on D-day and became the main egress from OMAHA Beach for the 1st Infantry Division.

Exit E-3 yielded slowly to engineer persistence. Still under artillery fire around 1630 hours, the beach remained unmarked for incoming boat traffic. As soon as engineers erected

signs, German artillery destroyed them. By 1700 hours, the 348th ECB had cleared the mines from the lateral road along the beach. Members of the 37th and 348th ECB moved to the base of the uplands to begin work in the draw, now choked with wrecked American tanks and half-tracks. When the men attempted to open a road from the beach, an 88-mm. gun interfered with their work. Captain Drnovich tried to destroy the gun, but was killed. For his bravery, he was posthumously awarded the Silver Star. Finally, just after midnight, tanks began to move over the hill to Colleville, but trucks could not move until the engineers cleared the roads the next morning.

The Dog beaches, between Les Moulins and Vierville, were the most strongly fortified part of OMAHA. There, stone-walled summer villas protected German machine gunners and snipers, and the cliffs at the westward end of Pointe de la Percee provided excellent observation points for German artillery positions behind the resorts. This area belonged to the 116th RCT, whose supporting engineer combat battalions, the 112th, 121st, and 147th, suffered severely during the landings.

Survivors of the first sections of the 147th to come in on Dog White at 0710 joined the infantrymen in the fight for Vierville or climbed the cliffs with the Rangers. At midmorning, the battalion commander, concerned about a growing congestion of tanks and vehicles on Dog Green, ordered his units to concentrate on blowing a concrete revetment blocking Exit D-1. With the help of the men of Lieutenant Colonel Robert R. Ploger's 121st ECB, the 147th opened the exit. But it was not fully usable until 2100 hours.

The initial contingent of the 121st lost one of its two company commanders, Captain Svend A. Holmstrup of Company C, before he could step off the ramp of his LCM. Within 24 hours, all three line company commanders in the 121st become casualties plus six other officers. The battalion also counted 53 enlisted casualties on D-day. During the course of clearing the Les Moulins draw at Exit D-3 between Dog Red and Easy Green, a burst of artillery fire killed the 112th ECB commander, Major William A. Richards, and enemy fire pinned his men behind a seawall. Even with the assistance of a platoon of the 147th, which came in with most

of its equipment during the day, the 112th was unable to open Exit D-3 until 2000 hours.

Colonel Paul W. Thompson of the 6th ESB came ashore at Dog Green about 0730 hours on D-day. His subordinate units were attached to the 5th ESB the first day, so he assisted on the beach. About 1100 hours, while pushing a bangalore torpedo under a wire barrier during an assault on a beach bunker at Exit D-1, he was shot and seriously wounded. For his actions that day, Colonel Thompson was awarded the DSC.

The task of opening Exit F-1 belonged to the 336th Engineer Battalion Beach Group, scheduled to land after 1200 hours on D-day at Easy Red near E-3, then march east across Fox Green to Fox Red. Some of the advance elements went ashore on E-3 at 1315 hours and made their way through the wreckage on the beach, falling when enemy fire came in and running during the lulls.

Three platoons of the 336th's Company C landed at the end of OMAHA farthest away from the Fox beaches at Dog Green about 1500 hours. The men assembled at the shingle bank and began a hazardous march toward Fox Red, more than 2 miles away. By the time the engineer column reached the F-1 area at 1700 hours, 2 men had been killed and 27 wounded.

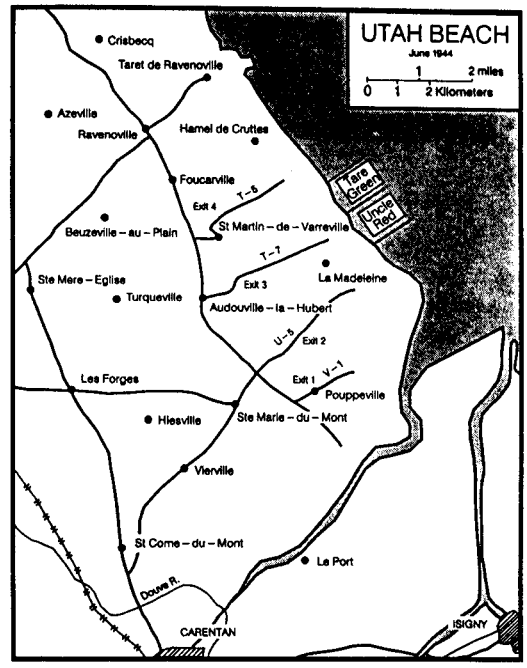
Once at Fox Red, the engineers turned to mine clearance. The men assembled several mine detectors from abandoned equipment and cleared the mines from fields near the beach. A tank dozer filled in an antitank ditch, and the teams worked up a hill with a tractor following, opening Exit F-1. By 2230 hours, 15 tanks had passed through the exit to the Colleville area to help the infantry clear the town.

Shortly after 1500 hours, Brigadier General William M. Hoge, Commanding General, Engineer Special Brigade Group (Provisional), landed at Exit E-1 and set up his command post in a concrete pillbox just west of the exit. From there, he assumed engineer command responsibility on OMAHA Beach, taking over from the 5th ESB commander, Colonel Doswell Gullatt.

To the west of OMAHA Beach lay the 9,000-yard-long UTAH Beach, extending from the mouth of the Vire River north–northwest to Quineville. Corps divided UTAH Beach into two beaches, Tare Green and Uncle Red, with four

exits. Longer and wider than OMAHA, UTAH lacked the commanding heights that gave the enemy at OMAHA a superior defensive position.

A masonry wall paralleled the beach. Behind it, the dunes leveled out into fields. Beyond the dunes, a water barrier ran a mile or so inland from Quineville on the north to Pouppeville on the south. The Germans had created the barrier by reversing the action of the locks constructed by the French to convert salt marshes into pastureland.



UTAH Beach

Seven causeways crossed the wet area in the region of the UTAH landings to connect the beach with a north–south inland road. Most were under water. The northernmost, although dry, could not be used because it was too close to German artillery. The assault area lay between two towns, La Madeleine on the south and Les Dunes de Varreville on the north. The southernmost beach on UTAH, Uncle Red, was 1,000 yards long and straddled a causeway road named Exit 3, which led directly to the village of Audouville-la-Hubert 3 miles behind the beach. Tare Green Beach occupied the 1,000 yards to the right of Uncle Red.

The density of obstacles encountered on UTAH Beach varied from moderate on the right flank to negligible on the left. The obstacles consisted largely of scattered wooden ramps shaped like the letter "A," element C, wooden and concrete piles, and tetrahedra or hedgehogs—about 5½ feet high and made of three or more steel rails or angles crossed at the centers, and so strongly set that the ends would cave in the bottoms of landing craft. Delay mines, conspicuously absent in the actual assault area, dotted the intended assault area.

VII Corps got the assault mission at UTAH. Plans called for the 8th Infantry Regiment, 4th Infantry Division, to go ashore, two battalion landing teams abreast, closely followed

by the 70th Tank Battalion as artillery support. They would work their way inland and make contact with the 82d and 101st Airborne Divisions, landing by both parachute and glider in the area behind UTAH Beach.

UTAH Beach plans called for the Ninth United States Air Force to bomb four paths through the beach obstacles just before H-hour, with fire lifting at H minus five minutes. The assault teams of the 1st ESB, Assault Force U, were to land immediately behind the 4th Division in the first wave to enlarge the paths opened by the planes and cut other gaps at 50-yard intervals.

Survivors of a landing craft sunk by enemy action off the coast of France used a life raft to reach UTAH Beach near Cherbourg.

The 1st ESB, supporting the landings of the 4th Infantry Division, VII Corps, on UTAH Beach, had duties similar to those of the 5th ESB on OMAHA. A battalion beach group of the brigade's 531st Engineer Shore Regiment operated Uncle Red Beach on the left and Tare Green Beach on the right. As soon as a third beach group landed, it would open a third beach, Sugar Red, to the right of Tare Green.

Plans called for engineer demolitions to begin at 0635 hours, five minutes after the infantry landed. Major Herschel E. Linn, who commanded the 237th ECB, led an ad hoc beach obstacle demolition party which controlled the teams. Linn planned eight 50-yard gaps, four in each of

the two landing sectors, Uncle Red and Tare Green. Twelve NCDUs would attack the seaward band of obstacles. Simultaneously, eight Army assault gapping teams would attack the landward obstacles.

Because of the smoke from the prelanding bombardment and the loss of two small Navy control vessels marking the line of departure off the beach, the entire first wave of the 8th Infantry's assault landed 2,000 yards south of its intended landfall. There they encountered light opposing fire and few obstacles. Within five to eight minutes, the teams blew the first gaps of more than 50 yards. The assault teams immediately wired and blew their second and even third shots, widening the gaps southward as planned. The work continued under enemy artillery fire that increased after H-hour. Then the demolitionists worked northward, widening cleared areas and helping demolish a seawall. By 0930, the teams had freed UTAH Beach of all obstacles. The Navy teams went out on the flats with the second ebb tide and worked until nightfall on the flanks of the beaches. At noon, the Army teams prepared to assist the assault engineers in opening the exit roads. The NCDUs and Army assault teams had completed most of the work by the time the support teams arrived. Within an hour, the engineers began to place explosives for breaching the seawall.

Although the action on UTAH Beach was not as severe as on OMAHA, the engineers did have problems in trying to construct roads off the beach. Less than half of the engineer's road-building equipment reached shore on D-day. Only 5 of 12 expected LCTs landed safely, all on the second tide. Many engineer vehicles drowned out when they exited into deep water. Hauling out such vehicles under enemy artillery fire proved one of the more difficult engineer tasks on D-day.

Artillery accounted for most of the personnel casualties in the 1st Engineer Brigade. The unit lost 21 who were killed and 96 were wounded on D-day. Strafing by enemy planes during the first evening caused most of the rest of the casualties.

While the assault teams blew obstacles, Companies A and C, 237th ECB, which had landed with the 8th Infantry at H-hour, created gaps in the seawall some 50 feet above high

water, removed wire, and cleared paths through the dunes to provide vehicle exits from the beach. Beyond the wall, a ridge of sand dunes, 10 to 15 feet high and 100 to 150 feet deep containing a 50-foot belt of mines, provided another obstacle to the engineers. Later in the morning, bulldozers arrived to build roads across the dunes.

Exit T-5, just north of Tare Green Beach, was flooded but had a hard surface and was usable during the first night. Exit U-5 at Uncle Red, above water for its entire length, became the first route inland leading to the village of Ste. Marie-du-Mont. South of U-5, near Pouppeville and the Douve River, lay the third road used on D-day, Exit V-1. Although in poor condition, the road was almost completely dry.

At the entrance to Exit U-5, the Germans had emplaced two Belgian Gates. Company A, 237th, blew them and also picked up several prisoners from pillboxes along the seawall. The engineers accompanied the 3d Battalion, 8th Infantry, inland along Exit U-5. About halfway across the U-5 causeway, they found that the Germans had blown a concrete culvert over a small stream. While the infantry proceeded, Captain Robert P. Tabb brought up a bridge truck and a platoon of Company B and began constructing a 30-foot treadway bridge, the first bridge built in the UTAH landing area. They were helped by men of the 238th ECB, who had landed around 1000 hours with the main body of the 1106th Engineer Combat Group.

Two companies of the 49th ECB accompanied the 2d Battalion, 8th Infantry, on its march south to Pouppeville. The engineers worked on Exit V-1 from the beach through Pouppeville to the north–south inland road, while the infantry made contact with the 101st Airborne Division. Company G, 8th Infantry, had the mission of capturing the locks southeast of Pouppeville that the Germans had manipulated to flood the pastureland behind Tare Green and Uncle Red beaches. An enemy strongpoint farther south at Le Grand Vey protected the locks.

While the infantry passed the locks, the 49th's Company A secured them, took 28 prisoners, and dug in defensively to protect them from recapture. The next day, the company overcame the German strongpoint at Le Grand Vey, capturing

59 prisoners, 17 tons of ammunition, large numbers of small arms, and three artillery pieces.

By dark on D-day, the 1st ESB had opened Sugar Red. It had cleared the beach of mines and wrecked vehicles; improved the roads; set up route markers; and made Exit T-5, the road leading inland from Sugar Red, passable for vehicles. It also established dumps for ammunition and medical supplies and found sites for other dumps behind the beaches.

During the period of organizing the beach, several members of the 1st ESB distinguished themselves in action. First Lieutenant Sidney Berger received the Silver Star for saving the lives of several men during an artillery attack. Private Everett Brumley received the Silver Star for rescuing a blinded, wounded soldier staggering along the beach. Sergeant James C. McGrath was awarded the Bronze Star for sweeping for mines while under artillery fire and rendering first aid to one of his men who was seriously wounded by a mine.

Although the troops generally ran behind schedule on OMAHA, at UTAH the entire 4th Division, with 20,000 men and 1,700 vehicles, was ashore within 15 hours after H-hour. The major difference between the two beaches was the absence of Teller mines on the obstacles at UTAH. The lack of mines enabled dozer work on UTAH to proceed faster. Even so, enemy fire took 10 percent of NCDU personnel and more than 8 percent of Army personnel.

Despite the doubts and fears of the early hours on OMAHA, the invasion was successful. That success was, in great part, attributable to the efforts of the engineers. They contributed to the victory in their dual role as engineers and infantry. Without their effort in destroying obstacles on the beach, clearing minefields, constructing exit roads off the beach, and fighting in the line as infantrymen, the invading force might not have held the beachhead and established the critical toehold in Nazi-occupied Europe.

Sources for Further Reading

As good a book as any on Normandy is Cornelius Ryan's *The Longest Day, June 6, 1944* (New York: Simon and Schuster, 1959).

Alfred M. Beck's *United States Army in World War II. The Corps of Engineers: The War Against Germany* (Washington, DC: Office of the Chief of Military History, 1985) has several chapters on Normandy.

Department of the Army, Historical Division's *Utah Beach to Cherbourg* and *Omaha Beachhead (6 June—13 June 1944)* (Washington, DC: Center of Military History, 1984) are both readable, short monographs on their respective landings.

Brigadier General William F. Heavey's *Down Ramp: The Story of the Army Amphibian Engineers* (Washington: Infantry Journal Press, 1947) has an excellent chapter on amphibian engineers in the Normandy invasion.